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Notice of Allowability	Application No.	Applicant(s)	
	10/675,212	SCHEUERLEIN ET AL.	
	Examiner	Art Unit	
	Hoai V. Ho	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed on 6/13/06.
2. ☒ The allowed claim(s) is/are 1,3-8,10-24 and 26-56.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

1. Claims 1, 3-8, 10-24, and 26-56 are presented for examination.
2. This application is in condition for allowance except for the following formal matters:

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with Andrew C. Graham on August 4, 2006.
5. Claim 1 has been amended as followed:

1. (Currently amended) A non-volatile memory cell array comprising within a first array block a first plurality of X-lines configured to be individually selected in a write mode of operation and configured to be simultaneously selected in a read mode of operation, and each associated with a first Y-line group numbering at least one Y-line and also associated with a second Y-line group numbering at least one Y-line.

6. Claim 2 has been canceled.
7. Claim 3, line 1, "2" has been deleted and inserted -1—in place thereof.
8. Claim 18, line 1, "2" has been deleted and inserted -1—in place thereof.
9. Claim 21 has been amended as followed:

21. (Currently amended) The memory array as recited in claim 20 further comprising:

a fourth plurality of X-lines associated with the first Y-line group, said fourth plurality of X-lines being configured, in a read mode of operation, to be

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simultaneously selected when the second plurality of X-lines is not selected; and

wherein each Y-line of the [[a]] second Y-line group numbering at least one Y-line, each of which is associated with the first, second, third, and fourth pluralities of X-lines.

10. Claim 27, line 1, “2” has been deleted and inserted –1—in place thereof.

11. Claim 29 has been amended as followed:

29. (Currently amended) A method of operating a non-volatile memory array comprising:

programming individual memory cells associated with a first X-line group of at least one X-line within a first array block and further associated with a first Y-line group of at least one Y-line within the first array block until a desired first aggregate memory cell read current is obtained when simultaneously selecting all the first group of X-lines and all the first group of Y-lines, at least one of the first X-line group and first Y-line group including more than one such X-line or Y-line, and each of the first X-line group associated with a second Y-line group numbering at least one Y-line; and

reading the memory array by simultaneously selecting all the first group of X-lines and all the first group of Y-lines and generating a signal responsive to the first aggregate memory cell read current.

12. Claim 30, line 3, “a” in a first occurrence has been deleted and inserted –the—in place thereof.

13. Claim 51 has been amended as followed:

51. (Currently amended) An integrated circuit comprising:

a memory array including:

a plurality of X-lines disposed on at least one layer of the memory array;

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a plurality of Y-lines disposed on at least one other layer of the memory array;

a plurality of non-volatile memory cells, each coupled to an associated one of the plurality of X-lines and an associated one of the plurality of Y-lines;

means for programming individual memory cells associated with a first X-line group of at least one X-line within a first array block and further associated with a first Y-line group of at least one Y-line within the first array block until a desired aggregate memory cell read current is obtained when simultaneously selecting all the first group of X-lines and all the first group of Y-lines, at least one of the first X-line group and first Y-line group including more than one such X-line or Y-line, and each of the first X-line group associated with a second Y-line group numbering at least one Y-line; and

means for reading the memory array by simultaneously selecting all the first group of X-lines and all the first group of Y-lines and generating a signal responsive to the aggregate memory cell read signal conveyed on the first group of Y-lines.

Allowable Subject matter

14. The following is a statement of reasons for the indication of allowable subject matter:

Claims include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure, taken individually or in combination, does not teach or suggest the claimed limitations having each associated with a first Y-line group numbering at least one Y-line and also associated with a second Y-line group numbering at least one Y-line in claim 1 or the same scope of these limitations for other independent claims; and a combination of the other limitations thereof as recited in claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai V. Ho whose telephone number is (571) 272-1777. The examiner can normally be reached on 7:00 AM -- 5:30 PM from Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



hvh
August 8, 2006



Hoai V. Ho
Primary Examiner
Art Unit 2827